Poverty, Family Process, and the Mental Health of Immigrant Children in Canada

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Objectives. This study examined the differential effects of poverty on the mental health of foreign-born children, Canadian-born children of immigrant parents, and children of nonimmigrant parents.

Methods. Secondary analysis of data from a national Canadian study of children between 4 and 11 years of age was conducted.

Results. Compared with their receiving-society counterparts, foreign-born children were more than twice as likely to live in poor families, but they had lower levels of emotional and behavioral problems. The effect of poverty on children's mental health among long-term immigrant and receiving-society families was indirect and primarily mediated by single-parent status, ineffective parenting, parental depression, and family dysfunction. In comparison, the mental health effect of poverty among foreign-born children could not be explained by the disadvantages that poor families often suffer.

Conclusions. Poverty may represent a transient and inevitable part of the resettlement process for new immigrant families. For long-stay immigrant and receiving-society families, however, poverty probably is not part of an unfolding process; instead, it is the nadir of a cycle of disadvantage. (*Am J Public Health.* 2002;92:220–227)

The apparently good mental health of immigrant children is a paradox. Familial poverty jeopardizes children's mental health and productivity,[1–3] and immigrant families typically are poorer than their host country counterparts.[4] Nevertheless, immigrant children are at least as healthy as majority-culture children and often outperform them in school.[5–9]

Immigration policy provides a partial explanation. Admission to Canada and the United States is neither random nor easy. As a result of selective immigration, many migrant households consist of well-educated, occupationally skilled, healthy people.[5,10]

Selection probably is only part of the answer, however. Although many newly arrived immigrant families are poor, factors that are specific to immigrant life may invest poverty with a different meaning for newcomers, compared with receiving-country families. For example, poverty in immigrant families apparently does not invoke the panoply of associated risk factors that it does for majority-culture families.[11] In addition, protective factors associated with immigrant family life may counteract some of the negative effects of poverty.[12–14]

To date, few empiric studies have directly examined the effect of poverty on immigrant children's mental health or the role that familial factors may play in mediating the relationship between the two. Using data from a recent national survey of Canadian children, we examined the relation between familial poverty and emotional and behavioral problems among immigrant children, Canadian-born children of immigrant parents, and children of nonimmigrant parents, as well as the role of family environment and social context in explaining the relationship between poverty and mental health in each of these 3 groups.

Although material deprivation may exert directly deleterious mental health effects,[14–17] economic disadvantage also is linked with ineffective parenting, parental psychopathology, intrafamilial hostility, and single-parent families—each of which can be independent, additive sources of mental health risk.[3,15–22] Poverty jeopardizes the mental well-being of mothers and fathers[18]—which, in turn, adversely affects the mental health of their children.[18–20,22] Intrafamilial hostility is another possible link between economic adversity and mental health: Socioeconomic disadvantage often creates or aggravates marital dissatisfaction, conflict, and aggression within families,[20] thereby jeopardizing children's mental health.[15,18,19]

Sixteen percent of Canadian children[23] and 25% of US children[24] live in single-parent families. Although single-parent households tend to be poor households,[25,26] poverty does not account for the association between single-parent family structure and emotional ill health. Regardless of household income, single-parent status increases the risk for childhood psychiatric disorders.[19,23]

In this study we examined putative explanatory links between poverty and mental health among immigrant children, Canadian-born children in immigrant families, and nonimmigrant children. Previous research highlights the importance of ethnocultural context in exploring etiologic links,[27] so we explored possible differences among immigrant and nonimmigrant children from varying ethnocultural backgrounds.

METHODS

Data

Our study data derive from the first cycle of Statistics Canada's and the Department of Human Resources Development's National Longitudinal Survey of Children and Youth (NLSCY),[28] a national study of 23 000 children ranging in age from birth through 11 years. Respondents originally were surveyed between fall 1994 and spring 1995 (cycle one); subsequently they were resurveyed every 2 years.

The person most knowledgeable (usually the mother) supplied information about the child or children included in the study, as well as about the household. The NLSCY used consistent mental health measures for children 4 years and older; the survey used different instruments for children younger than 4 years. Because the use of different measures obviates comparisons, our analyses are restricted to the subsample of 13 349

children aged 4 through 11 years at the time of the 1994–1995 survey.

Study Populations

The NLSCY conducted a countrywide multistage stratified cluster sampling of households, with oversampling in rural areas. All children from birth through 11 years within selected households were recruited, to a maximum of 4 children. The NLSCY sample underrepresents immigrant families, most of whom congregate in metropolitan areas.[29] Analyses reported here therefore rely on a weighting procedure developed by Statistics Canada.

This report focuses on 3 subgroups. Immigrant children (IC) are children born in a foreign country to non-Canadian parents and living in Canada at the time of the study. This group (n=684) makes up 5.1% of the total weighted sample. Canadian-born children of immigrant parents (CBI) are children born in Canada to a family in which at least 1 of the parents entered the country as an immigrant (n=2573, 19.3% of the total). Nonimmigrant children (NI) are Canadian-born offspring of Canadian-born parents (n=10 092, 75.6% of the total).

Definition of Poverty

To define poverty, we used Statistics Canada's low income cutoff—an index that takes into account income versus expenditure patterns in different family-size categories and in different urban locations.[28] A family that is at or below the low-income cutoff spends 20% more of its income on food, clothing, and shelter than an average household. For example, in 1997 the average Canadian family spent 34.3% of its income on food, clothing, and shelter, whereas a family below the low-income cutoff spent 54.3% or more of its income on these necessities. The present study focuses on children in deep poverty—defined as households with a total income of 75% of the low-income cutoff and below.[26]

Study Variables

The study's dependent variables were emotional and behavioral problems—the first an example of "internalizing" disorder, in which suffering is primarily inward, and the second an example of "externalizing" disorder that bothers others as much as or more than the child himself or herself.[30,31] The measures used, as well as reports on psychometric properties and descriptive statistics, are available from the authors.

Predictor variables included ineffective parenting, parental depression, family dysfunction, single-parent status, and demographic characteristics. Ineffective parenting was measured by a subscale from the Parenting Practices Scale[32]; parental depression by a 12-question abbreviated version of the widely used Center for Epidemiologic Studies Depression Scale[33]; and family dysfunction by the Family Assessment Device,[34] a 12-item questionnaire measuring communication, problem solving, readiness of family members to show feelings, readiness of family members to help and support each other, and family roles. Single-parent families were identified by answers to the question "Does the person most knowledgeable have a spouse or partner living in the household?"

Control variables for multivariate analyses included age and sex of the child, length of stay in Canada, and race/ethnicity. Length of stay was measured differently for immigrant children and children born to immigrant parents. Among immigrant children, length of stay meant the number of years the child had lived in Canada before the NLSCY interview. Scores ranged from 1 to 11 years, with a mean of 5.8 years. For Canadian-born children of immigrant parents, length of stay measured the number of years following an immigrant parent's arrival in Canada. Scores ranged from 4 to 49 years, with a mean of 23 years. Four categories were used to define the race/ethnicity variable: European/White, Asian, Black, and others. European/White was the reference group for analyses employing dummy variables.

Regression Analyses

Three models were tested in each of the 3 groups (IC, CBI, and NI). Model 1, the base model, included poverty, age, and sex—which, according to previous NLSCY analyses, have significant associations with mental health[31]—as well as length of stay as a proxy measure of acculturation. To control for ethnic heterogeneity, we included 3 dummy variables—Asian, Black, and others; European/White constituted the reference group. Model 2 added single-parent status. Since single-parent status tends to cause both poverty and children's mental ill health, it would be reasonable to interpret changes in the coefficient of poverty from model 1 to model 2 to mean that the effects of poverty are partly attributable to a direct relationship between single-parent status and children's mental health. Model 3 added ineffective parenting, parental depression, and family dysfunction. Changes in the coefficient of poverty between models 2 and 3 indicate the potential effect of mediating variables in explaining the relationship between poverty and children's mental health. Because of space constraints, in the tables we report only model 3 results for each of the 3 study groups.

RESULTS

Poverty, Immigrant Status, and Mental Health

Descriptive statistics for poverty, family environment, and mental health for immigrant children, Canadian-born children of immigrant parents, and nonimmigrant children are given in Table 1. New immigrant families were much more likely than receiving-society families to be poor. About 36.4% of new immigrant children aged 4 through 11 years lived in poor families, compared with only 13.3% of children in nonimmigrant families.

Disturbed Family Environment, Poverty, and Mental Health

Poverty was associated with higher proportions of single-parent families and higher levels of parental depression and family dysfunction. Poverty was also associated with ineffective parenting among nonimmigrant families but not among immigrant families. Overall, poor immigrant families were less disadvantaged by single-parent status.

Emotional problems. The results of regressions of emotional disorder on demographic, poverty, and family variables are shown in Table 2. The test of model 1 (not shown) among the IC group revealed that sociodemographic variables together with poverty accounted for 6.2% of the variance in emotional problems; poverty, sex, and ethnicity were significant predictors. Introducing single-parent status in model 2 did not affect the re-

TABLE 1—Descriptive Statistics for Poverty, Immigrant Status, Family Environment, and Mental Health

	All Groups (n=13349)	Immigrant Children (n=684)	Children of Immigrant Parents (n=2573)	Nonimmigrant Parents (n=10092)	Statistical Test Value, P[b]
Poverty					
Poor	14.5%	36.4%	13.5%	13.3%	χ^2=277.7, <.001
Mental health[a]					
Emotional problems	2.58 (2.61)	2.16 (2.39)	2.37 (2.47)	2.67 (2.65)	F= 22.8, <.001
Poor	3.16 (2.91)	2.79 (2.67)	2.82 (2.47)	3.31 (3.03)	F= 5.9, <.001
Non-poor	2.49 (2.54)	1.80 (2.13)	2.30 (2.46)	2.57 (2.58)	F= 26.2, <.001
T value and P[c]	9.4, <.001	5.0, <.001	3.5, <.001	8.4, <.001	
Behavioral Problems	1.37 (1.86)	.96 (1.37)	1.08 (1.58)	1.47 (1.95)	F= 63.0, <.001
Poor	1.72 (2.22)	1.21 (1.56)	1.30 (1.84)	1.91 (2.37)	F= 17.3, <.001
Non-poor	1.31 (1.79)	.82 (1.22)	1.04 (1.53)	1.41 (1.86)	F= 53.0, <.001
T value and P[c]	7.5, <.001	3.4, <.001	2.3, <.05	7.4, <.001	
Family environment					
Single parent	16.4%	16.5%	11.1%	17.7%	χ^2= 66.3, <.001
Poor	54.7%	26.4%	42.8%	63.0%	χ^2=137.8, <.001
Nonpoor	9.9%	10.8%	6.2%	10.8%	χ^2= 41.2, <.001
χ^2 value and P[c]	2427, <.001	27.9, <.001	407.8, <.001	2176, <.001	
Ineffective parenting[a]	8.85 (3.86)	7.96 (4.04)	8.69 (4.07)	8.96 (3.78)	F= 23.5, <.001
Poor	9.17 (3.96)	8.01 (3.13)	8.97 (4.30)	9.44 (3.97)	F= 14.1, <.001
Nonpoor	8.80 (3.84)	7.93 (4.49)	8.64 (4.03)	8.88 (3.75)	F= 14.4, <.001
T value and P[c]	3.9, <.001	0.2, >.05	1.4, >.05	4.8, <.001	
Parental depression[a]	4.76 (5.61)	4.82 (5.16)	4.99 (6.46)	4.70 (5.41)	F= 2.6, >.05
Poor	7.79 (7.57)	5.71 (5.64)	10.79 (9.78)	7.41 (7.00)	F= 38.8, <.001
Nonpoor	4.25 (5.04)	4.29 (4.77)	4.09 (9.78)	4.29 (5.00)	F= 1.4, >.05
T value and P[c]	19.6, <.001	3.3, <.01	12.3, <.001	15.5, <.001	
Family dysfunction[a]	7.99 (5.22)	8.57 (5.54)	8.48 (5.44)	7.82 (5.13)	F= 20.1, <.001
Poor	9.78 (5.43)	10.58 (4.97)	11.60 (5.97)	9.17 (5.25)	F= 30.2, <.001
Nonpoor	7.68 (5.13)	7.38 (5.52)	8.00 (5.20)	7.62 (5.08)	F= 5.7, <.001
T value and P[c]	16.3, <.001	7.7, <.001	10.4, <.001	10.1, <.001	

[a]Mean and standard deviation.
[b]Tests for differences among immigrant children, children of immigrant parents, and children of nonimmigrant parents.
[c]Tests for differences between poor and nonpoor children.

lationship between poverty and mental health, nor did it increase the coefficient of determination. Although adding ineffective parenting, parental depression, and family dysfunction in model 3 (see columns 1 and 2 of Table 2) reduced the impact of poverty on mental health by 46%, poverty remained a risk factor for the mental health of the IC group. Immigrant girls had fewer emotional problems than immigrant boys. Whereas models 1 and 2 suggested that Asian immigrant children had a mental health advantage over European/White immigrant children, adding parenting variables in model 3 erased the ethnic differences. Model 3 variables accounted for 23% of the variance in IC emotional problems scores.

The third and fourth columns of Table 2 present the results of model 3 relating emotional disorder to predictor variables in the CBI group. Although poverty had a significant relationship with the dependent variable in model 1, the coefficient of determination for this model (R^2=.023) suggests that poverty and sociodemographic factors account for very little variance. Adding single-parent status in model 2 had no effect on the poverty coefficient and increased R^2 only very slightly, to .024. Addition of ineffective parenting, parental depression, and family dysfunction in model 3, however, raised R^2 to .254. With the addition of the familial factors, the effect of poverty became insignificant. Of the remaining variables, only age had a statistically reliable relationship with emotional health: emotional problems increased with child age. As with the IC results, an apparent mental health advantage for Asian children in models 1 and 2 disappeared with the addition of familial factors in model 3.

Columns 4 and 5 of Table 1 examine the effect of poverty on emotional problems

TABLE 2—Regression of Emotional Problems on Demographics, Poverty, Single-Parent Family, and Parental Characteristics

	Immigrant Children		Children of Immigrant Parents		Children of Nonimmigrant Parents	
	B	SE	B	SE	B	SE
Constant	.65	.43	-.89**	.21	-1.28**	.11
Poor	.52**	.20	-.01	.16	.02	.08
Age	-.01	.04	.11**	.02	.18**	.01
Female	-.36*	.18	-.14	.09	.25**	.05
Years after immigration	.02	.04	.001	.01	. . .	. . .
Asian	-.20	.27	-.14	.17	-.63	.76
Black	-.28	.42	-.17	.28	-.51	.59
Others	-.56**	.19	-.01	.13	.21	.24
Single-parent family	.17	.24	.49**	.17	.62**	.07
Ineffective parenting	.14**	.02	.22**	.01	.21**	.01
Parental depression	.02	.02	.10**	.01	.10**	.01
Family dysfunction	.12**	.02	.02*	.01	.004	.01
N	630		2429		9655	
Adjusted R^2	.230		.254		.205	

*P < .05; **P < .01.

among children in the NI group. According to model 1, poverty had a significant relationship with emotional disorder. Adding single-parent status in model 2 reduced the effect of poverty observed in model 1 by 72%. Any remaining effect of poverty on children's emotional problems disappeared with introduction of the familial factors in model 3. The R^2 values associated with models 1 and 2 (.032 and .049, respectively) suggest that poverty, age, sex, race/ethnicity, and single-parent status explain very little of the variance in emotional problems. In contrast, the increase in R^2 from .049 in model 2 to .205 in model 3 suggests that ineffective parenting and parental depression contribute substantially to NI emotional problems. NI girls tended to have more emotional problems than NI boys—an opposite result from that observed in immigrant families. There was no association between emotional disorder and ethnocultural background in the NI group.

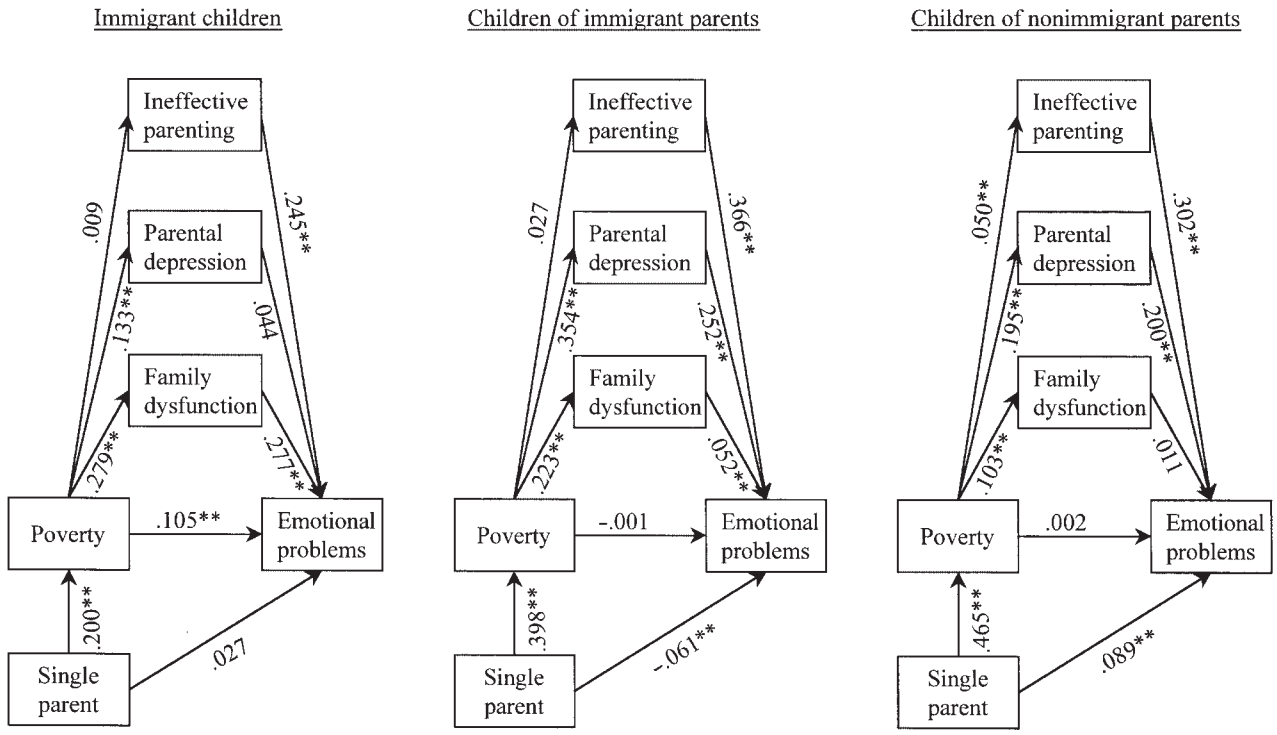
Figure 1 depicts the role of familial dynamics in mediating the relationship between poverty and emotional disorder. To qualify as a mediator, a variable must be significantly associated with poverty and emotional problems and cause a change from significant to nonsignificant in the relationship between poverty and children's mental health once the variable is controlled for in the model.[35,36] Although familial factors had no mediating effect on the relationship between poverty and emotional disorder in the IC group, parental depression and family dysfunction did mediate this association in the CBI group, and ineffective parenting and parental depression played a mediating role in the NI group.

Behavioral problems. The results in columns 1 and 2 of Table 3 show that the association between poverty and behavioral problems in the IC group remained significant after the introduction of familial factors into the equation. Although single-parent status and ineffective parenting increased the risk of behavioral problems, the coefficient of poverty remained stable in models 1, 2, and 3. Immigrant girls tended to have fewer problems than immigrant boys. Behavioral problems decreased with child age increased with increasing length of stay. Compared with European/White children, immigrant children from other ethnic groups tended to have fewer problems, although the difference between Asian and European/White immigrant children became insignificant when the familial factors were controlled.

Analysis of CBI data revealed that the relationship between poverty and behavioral problems observed in model 1 was reduced by 20% after introduction of single-parent status in model 2. As shown in columns 3 and 4 of Table 3, introduction of family variables in model 3 resulted in a further decrease of the effect of poverty on behavioral disorder, with the relationship failing to reach statistical significance. The coefficient of multiple determination changed from .046 in model 1 to .048 in model 2 and to .187 in model 3—a pattern that suggests that family dynamics played the strongest role in explaining variation in the level of behavioral problems. Younger children had more behavioral problems than their older counterparts, and girls had fewer problems than boys. Length of stay in Canada had no significant effect. Compared with children whose parents were European/White immigrants, children whose parents came from other countries tended to have fewer problems, although the difference between Asian and European/White immigrant families became nonsignificant after familial factors were controlled.

In the NI group, the significant association between poverty and behavioral problems observed in model 1 decreased by 63% after introduction of single-parent status in model 2. After ineffective parenting, parental depression, and family dysfunction were added in model 3 (as shown in columns 5 and 6 of Table 3), the remaining effect of poverty on behavioral problems was reduced a further 56% and become statistically nonsignificant. The increase in R^2 from .029 in model 1 to .038 in model 2 and to .214 in model 3 suggests that family dynamics contributed far more significantly than other study variables to behavioral problem variations. Younger children were at higher risk than their older peers for displaying behavioral disorder, and girls were at lower risk than boys. There was no significant difference in behavioral problems across racial/ethnic groups.

As shown in Figure 2, family dynamics variables did not mediate the association between poverty and behavioral problems in the IC and CBI groups. Ineffective parenting, parental depression, and family dysfunction did, however, mediate the mental health effects of poverty in the NI group.



Note. Numbers are standard regression coefficients.
*P<.05; **P<.01.

FIGURE 1—Mediational pathways through which poverty affects children's emotional problems.

TABLE 3—Regression of Behavioral Problems on Demographic, Poverty, Single-Parent Family, and Parental Characteristics

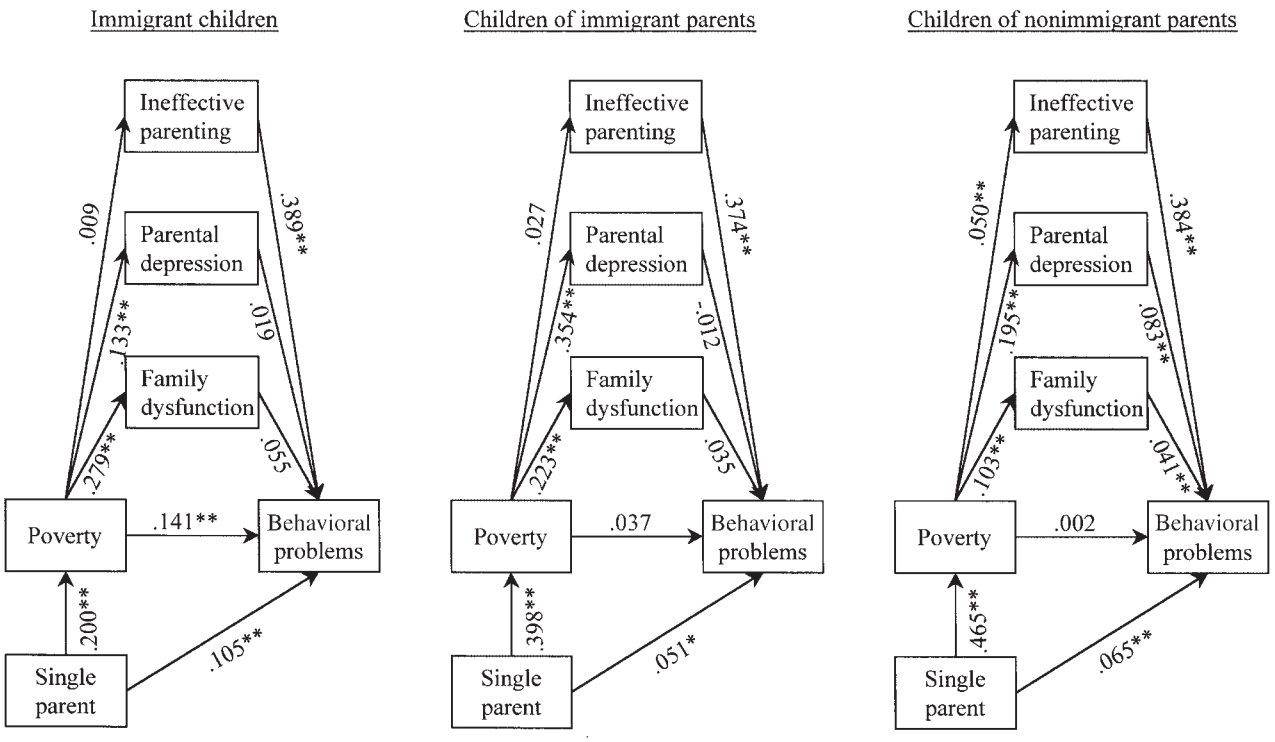
	Immigrant Children		Children of Immigrant Parents		Children of Nonimmigrant Parents	
	B	SE	B	SE	B	SE
Constant	-.71	.24	.31**	.14	-.04	.08
Poor	.40**	.11	.18	.10	.08	.06
Age	-.12**	.02	-.04**	.01	-.05**	.01
Female	-.45**	.10	-.37**	.06	-.39**	.04
Years after immigration	.05*	.02	-.002	.003	. . .	. . .
Asian	-.19	.15	-.21	.11	.72	.55
Black	-1.17**	.23	-.44**	.18	.49	.43
Others	-.46**	.11	-.28**	.08	.22	.17
Single-parent family	.39**	.13	.26*	.11	.33**	.05
Ineffective parenting	.13**	.01	.14**	.01	.20**	.004
Parental depression	.005	.01	-.003	.01	.03**	.004
Family dysfunction	.01	.01	.01	.01	.02**	.004
N	630		2411		9622	
Adjusted R^2	.291		.187		.214	

*P<.05; **P<.01.

DISCUSSION

Descriptive findings confirm the paradox with which the current inquiry began. Children in poor families experience greater risk for developing mental health problems than children in nonpoor families. Yet although immigrant children are more likely to live in poverty, they enjoy a mental health advantage over their receiving-society counterparts.

Single-parent status did not affect the relationship between poverty and the mental health of immigrant children or Canadian-born children of immigrant parents. Among nonimmigrant children, by contrast, this factor accounted for most of the variance that otherwise appeared to be attributable to poverty. Ineffective parenting, parental depression, and family dysfunction mediated the relationship between poverty and the mental health of Canadian-born children in immigrant and nonimmigrant families, but family



Note. Numbers are standard regression coefficients.
*$P < .05$; **$P < .01$.

FIGURE 2—Mediational pathways through which poverty affects children's behavioral problems.

factors played a relatively weak role among foreign-born children. These results suggest that for majority-culture children, material deprivation is a less significant threat to mental health than the familial concomitants of poverty. Intrafamilial problems help to explain the effect of poverty among Canadian-born children but not among their immigrant counterparts.

Context probably affects the meaning of poverty. The first decade of resettlement is a period of struggle for many immigrant families. After 10 to 12 years, however, the average income of immigrants in Canada surpasses that of the national population.[37] The results of the current study suggest that for new immigrants, poverty's deleterious effects are attributable mainly to material deprivation. Although new immigrants are very likely to experience unemployment, underemployment, and poverty during the initial period of their resettlement, the expectation that these difficulties eventually will be overcome may help to protect these families from breakdown and dysfunction.[38]

Although most immigrant families adapt successfully to their new environments, resettlement stories with happy endings are far from universal. The results of this study suggest that some immigrants stay poor and, like their poor nonimmigrant counterparts, become part of a chronically impoverished, socially troubled, and psychologically stressed underclass. Persistent poverty has stronger negative effects on children's IQs, school attainment,[39] internalized problems,[40] and externalized behaviors[15] than occasional poverty. Compared with transiently poor families, persistently impoverished families face greater material deprivation, more intense financial stress, and greater likelihood of parental depression and familial discord and are more likely to use harsh disciplinary practices.[40–42] Rather than experiencing poverty as a bump on the road to successful integration, immigrant families may find persistent privation leading them into a cul-de-sac of social disadvantage, family breakdown, and individual despair.

Study limitations include the fact that the mental health, family functioning, and parenting practices measures we used were developed among and standardized on majority-culture families. Although the reliability analyses provide some reassurance about these measures' cross-cultural applicability, acceptance of equivalent scores on mental health measures as reflective of equal response intensity remains a major methodological concern.[43]

The cross-sectional data impose a second limitation. Information that is based only on the first wave of NLSCY survey results cannot fully address the potential effects of acculturation on immigrant parents and their children, nor can these data answer questions of se-

quencing. For example, is poverty more likely to precede or follow single-parent status? Does poverty create conditions for familial dysfunction and mental disorder, or do personal and familial characteristics create a risk for familial poverty? Exploration of the apparent association between increased length of stay in Canada and increased risk of developing mental health problems likewise will require longitudinal data. Hypothesized unidirectional relationships must be subjected to empirical testing with longitudinal data. For example, children's mental health may influence the mental health of parents, parenting styles, and family functioning—rather than the reverse, as we assume.

Although poverty's links to mental health appear to vary across the different study groups, poverty compromises the well-being of immigrant children as it does that of their Canadian-born counterparts. Demonstrating that material deprivation jeopardizes mental health does not explain the relationship. Such an explanation will require research that focuses specifically on immigrant and refugee children and examines physical as well as social environmental factors that may link poverty to mental health.

The apparent mental health advantage of immigrant children over their native-born counterparts suggests that Canadian immigration guidelines are helping to ensure selection of healthy, resilient, success-bound families and children. The good news about immigrant children must not be allowed to induce complacency, however. Regardless of how carefully people are selected for immigration, their ultimate success—as well as the success of their children—depends on their postmigration reception.[44,45] The fact that more than one third of immigrant children in Canada live in deep poverty is not merely reprehensible; it is a disadvantage that has the potential to damage these children's mental health and may yet come back to haunt their adopted country. Alleviating immigrant family poverty through creative job training programs, equitable job access, and appropriate recognition of foreign credentials should become a national priority.

Aside from eliminating sources of mental health risk, receiving societies must strive for better understanding of factors that protect or promote immigrant children's well-being. Research with immigrant and minority communities suggests that there are mental health benefits of social capital, including intrafamilial ties and supportive communities.[44–48] By supporting the like-ethnic communities from which many immigrant families derive support in the early years of resettlement, Canada's multiculturalism policy probably contributes to familial social capital.[45] Such policy, however, often is realized only partially at best, and this is true of Canadian multiculturalism.[44,45] Despite rules and guidelines designed to obviate it, delegitimation of immigrant families' social and cultural capital by dominant-society institutions such as schools erodes the families' protective potential and creates emotional conflict for children.[6,11,49,50] Research on resettlement, and societal willingness to translate the results of such research into improved policy and practice, will help to ensure that immigrant children and their families experience the success to which they aspire and by which receiving societies judge the wisdom of their selection and settlement policies. ■

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Contributors

All 4 authors contributed to the conceptualization and planning of the study. M. Beiser and F. Hou analyzed the data and wrote the text. M. Tousignant and I. Hyman suggested revisions to drafts of the manuscript.

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